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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/813,457

03/30/2004

Matthew Compton

282567US8X

4686

22850

7590

05/14/2008

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EXAMINER

MARANDI, JAMES R

ART UNIT

PAPER NUMBER

2623

NOTIFICATION DATE

DELIVERY MODE

05/14/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/813,457	Applicant(s) COMPTON ET AL.	
	Examiner JAMES R. MARANDI	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/30/04, 7/25/05, 7/16/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. "Video Processing" can mean anything and in the vast universe of possibilities is not indicative of the inventive concept (if any). A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The disclosure is objected to because of the following minor informalities:
 - The term "VTR 54" (page 6, lines 17-27) appears to be a typographical oversight as it does not appear in Figure 1.
 - Element "master ENIC NIM 63" (page 7, line 29) is not shown in Figure 1.
 - The term "AVSCP" (page 17, line 5+) appears to be a typographical oversight as it does not appear in Figure 2.

Appropriate correction is required.
3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d) (1) and MPEP § 608.01(o). In claims 25, 26, and 27 applicant has failed to provide antecedent basis for the claimed "medium" limitations. Appropriate correction is required.

Drawings

4. The drawings are objected to because in figure 2, the label "AUSCP" is not referenced in the disclosure. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 24-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non- statutory subject matter.

Claim 24 fails to fall within a statutory category of invention. It is directed to the program code itself. It is not a process occurring as a result of executing the program, a machine programmed to operate in accordance with the program nor a manufacture structurally and functionally interconnected with the program in a manner which enables the program to act as a computer component and realize its functionality. It's also clearly not directed to a composition of matter.

Therefore, it's non-statutory under 35 USC 101.

Claim 25 and 26 are directed to a medium which is a storage device that is non-functional descriptive material that does not constitute a statutory process.

Claim 27 is directed to a "transmission medium" which is a signal that is neither a process ("action"), machine, manufacture nor composition of matter and therefore does not fall within one of the four statutory categories of § 101.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- Claims 1, 2, 6, 7, 15-17, and 20-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Patrick White et al., US Patent Application Publication No. 2002/0049979 (hereinafter “White”).

Regarding claim 1, White discloses:

A network interface device (Figure 1, element 110) connectable to a network (Figure 4A, Paragraph[27]), said device being arranged to receive a digital video data stream of a first resolution and, substantially in real time, to launch data packets representing said digital video data stream onto said network, said device comprising:
a video generator to produce from said video data stream of said first resolution a video data stream of a second, lower

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resolution (thumbnails are lower resolution streams, Figure 3A,

Paragraph [26]; **and**

a packetiser (110, 401, and 402; as shown in Figure 4A, video streams are launched over an Internet network, thereby packetized)**operable:**

- **to format said video data stream of said second resolution into data packets to be launched onto said network** (Figure 4A, paragraphs [27], and [28]); **and**
- **to format at least that part of said video data stream of said first resolution which is not represented by said video data stream of said second resolution into data packets to be launched onto said network.** (Figure 4A, paragraphs [27], and [28])

Regarding claim 2, **comprising a multiplexer (401) for multiplexing together said data packets corresponding to said video data streams of said first and second resolutions** (paragraph [27]).

Regarding claim 6, **in which:**

said device is arranged to receive two or more input digital video data streams (401);

said video generator is arranged to produce two or more video data streams of said second resolution from respective input digital video data streams (401); and

said packetiser is arranged to format at least said parts of said video data streams of said first resolution into data packets and to format said video data streams of said second resolution into data packets (401).

Regarding claim 7, **in which the or each video data stream of said second resolution comprises an uncompressed video data stream.**

(As shown in Figure 3A, compression, element 332, is optional, therefore, uncompressed thumbnails [low resolution] streams are possible)

Claim 15 is rejected by the same analysis as claim 1.

Regarding claim 16, **A device according to claim 1, in which: a subset of said video data stream of said first resolution can be derived from said respective video data stream of said second resolution; and said packetiser is arranged to format only a part, being all but said subset, of said video data stream of said first resolution into data packets (paragraph 61).**

Regarding claim 17, **in which: said device is arranged to receive one**

or more audio and/or control data streams associated with said digital video data stream; said packetiser is arranged to format said audio and/or control data streams into data packets; and said network interface is arranged to launch said data packets of said audio and/or control data streams onto said network.(Figure 10)

Claims 20 **Video source** and claim 21 **destination equipment comprising a network interface device according to claim 1**, are rejected by the same analysis as claim 1, as both video source and destination equipment are networked via the network interface device.

Regarding claim 22, **A video network (Figure 10) comprising: one or more video handling devices each comprising a network interface device according to claim 1; and a data network linking said video handling devices** (Figure 10, Paragraph [46]. Video handling equipment is networked using the network interface device of claim 1, thereby creating a data networking linking said devices. As we have already rejected the networked interface device of claim 1, therefore the devices and the network of claim 22 are also rejected by the same analysis.

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Claim 23 **A method of operation of network interface device** of claim 1 is hereby rejected by the same analysis.

Claim 24 **Computer software carrying out a method** effectuating the device of claim 23 is hereby rejected by the same analysis.

Claims 25, 26, and 27 pertaining to media holding the software of claim 24 are rejected by the same analysis.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- Claims 3 , 4, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over White in view of A. Atwater et al., US Patent Publication number 2002/0048275 (hereinafter "Atwater").
 - Regarding claims 3 and 4, white fails to disclose **launching said data packets corresponding to said video data stream of said first resolution** (higher resolution F (focus)) **onto said network as**

a multicast group; and further, **launching said data packets corresponding to said video data stream of said second resolution** (lower resolution T (thumbnail)) **onto said network as a second multicast group, different to said first multicast group.**

However, Atwater substantially discloses a packet based network in which video sources are associated with different multicast groups (Paragraphs [42]-[46]). White further teaches (paragraph [35]) user addressable T (thumbnail, low resolution) and F (Focus, high quality resolution), therefore, it would have been obvious to a person of ordinary skill, at the time invention was made, to modify White's teaching to include multicast group addressing, as taught by Atwater, to efficiently distribute low resolution and high resolution streams to respective groups of users as demanded.

- Claim 28, **A network interface device connectable to a network** (white, 110), is rejected by the same analysis as claims 1 and 3.
- Claim 29, **A method of operation of a network interface device connectable to a network**, is rejected based on the same analysis as claims 1 and 3.

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- Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over White and Atwater as applied to claim 3 above, and further in view of James Curtis, UDP vs. TCP, (hereinafter "Curtis").

White and Atwater do not explicitly mention **multicast IP/UDP**, however, Curtis substantially discloses UDP as the right protocol in a real time multicast environment. Therefore, it would have been obvious to a person of ordinary skills, at the time of invention, to modify the combined system of White and Atwater to include Curtis' teaching to offer a reliable multicast environment using IP/UDP.

- Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over White in view of Foresight Imaging, News Release of 2/11/2002, as reported by ThomasNet (hereinafter "FI").

White discloses creation of a low resolution image (Figure 3A, element 331; Paragraph [12]). As an example, White uses every fourth pixel in the image to reduce the size of the image while reducing the resolution. However he does not explicitly cite RGB 555 format. FI disclosed the product I-RGB where a frame grabber and streamer (White's element 100) uses RGB 555 to process and encode pixels. Therefore, it would have been obvious to a person skilled in the art, at the time of invention, to modify White's invention to include FI's product to offer a wider range of

pixel processing to achieve more choices in manipulating resolution.

- Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over White and FI as applied to claim 8 above, and further in view of “Multimedia over IP”, McGraw-Hill Companies 2000 (hereinafter “McGraw-Hill”)

The system of White and FI fails to disclose formatting video data streams into RTP packets. RTP is a standard that has been around for some time for transporting real-time data across networks. This standard is taught in a presentation by McGraw-Hill (page RT-14). Therefore it would have been obvious to a person of ordinary skill, at the time the invention was made, to modify the system of White and FI to include RTP, as taught by McGraw-Hill to further promote network efficiency.

- Claims 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over White in view of McGraw-Hill.

White fails to disclose formatting video data streams into RTP packets. RTP is a standard that has been around for some time for transporting real-time data across networks. This standard is taught in a presentation by McGraw-Hill (page RT-14). Therefore it would have been obvious to a person of ordinary skill, at the time the invention was made, to modify the

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White's teaching to include RTP, as taught by McGraw-Hill to further promote network efficiency.

- Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over White and McGraw-Hill as applied to claim 10 above, and further in view of official notice.

Examiner takes official notice that BT.656, cited in claim 11, is notoriously well known as ITU-R Recommendation BT.656, sometimes also called **ITU656**, describes a simple digital video protocol for streaming uncompressed PAL or NTSC Standard Definition TV (525 or 625 lines) signals. The application layer taught by McGraw Hill (RT-16) allows for variety of standards to be deployed over RTP. Furthermore, White invention does not limit the type of video signal captured by the camera. Therefore, it would have been obvious to a person of ordinary skill, at the time of invention, to modify the system of White and McGraw-Hill to use BT.656 to offer service to regions of the world requiring such standards.

- Claims 12, 13, 14, 18 and 19 are rejected under 35 U.S.C 103 (a) as being unpatentable over White, in view of official notice.

White substantially discloses connecting various A/V devices to a network and generating/ managing video and audio streams (Figure 1).

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Furthermore, he teaches reduction in bandwidth use through creation of low resolution images (331) and/or compression techniques (332). The analog video is processed and digitized at the application layer (seven layers of (ISO/ OSI) and handed to transport and the lower layers for transmission.

Examiner takes official notice that video processing (NTSC, PAL, SECAM, interlace manipulation, etc.), as recited in claims 11, 12, 13, 14, 18, and 19 are notoriously well-known (see any text book in digital image processing), making it obvious to a person of ordinary skill in the art, at the time of invention, to use such techniques in the system of White to accommodate various regions of the world (e.g. PAL in Europe and NTSC in North America)

Prior Art Made of Record

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Kinya Washino et al., "Video Monitoring and Conferencing Suystem", US Patent No. 5,625,410
- A. J. Eglit et al., "Method and Apparatus for Upscaling Video Images in a Graphics Controller Chip", US Patent No. 6,115,507
- Shawn Carnahan, "Internet Protocol for the Delivery of Complex Digital Media Content"; US Patent Application Publication No. 2006/0010245

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Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES R. MARANDI whose telephone number is (571)270-1843. The examiner can normally be reached on 8:00 AM-5:00 PM M-F, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher C. Grant can be reached on (571) 272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James R. Marandi/

/Christopher Grant/
Supervisory Patent Examiner, Art Unit 2623